

**CLASSIFICATION**      **CONFIDENTIAL**      **CONFIDENTIAL**

**CENTRAL INTELLIGENCE AGENCY** **REPORT**  
**INFORMATION FROM**  
**FOREIGN DOCUMENTS OR RADIO BROADCASTS** **CD NO.**

50X1-HUM

COUNTRY USSR

DATE OF INFORMATION 1950

**SUBJECT** Economic; Technological - Construction,  
road machinery

**HOW PUBLISHED** Monthly periodicals

DATE DIST. 20 Jun 1951

**WHERE  
PUBLISHED** Moscow

NO. OF PAGES 4

DATE  
PUBLISHED Jan 1951

SUPPLEMENT TO  
REPORT NO.

LANGUAGE Russian

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C. 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE Periodicals as indicated.

FIVE-YEAR PRODUCTION ACHIEVEMENTS OBVIATE NEED  
FOR IMPORTING ROAD, CONSTRUCTION MACHINES

POSTWAR OUTPUT EXCEEDS PREWAR PARK -- Moscow, Mekhanizatsiya Trudoyemkikh i  
Tvazhelykh Rabot, Jan 51

The machines designed to mechanize construction processes and to produce building materials, which the Ministry of Construction- and Road-Machine Building put out during the last Five-Year Plan, fall into over 300 individual designations. The number of excavators produced during the Five-Year Plan greatly surpassed the prewar park, while the number of excavators produced during 1950 was seven times greater than the figure for 1940. -- S. Ya. Fomin, Minister, Construction- and Road-Machine Building

MORE MACHINES NEEDED FOR FULL MECHANIZATION OF CONSTRUCTION WORK -- Moscow, Mekhanizatsiya Stroitel'stva, Jan 51

Machines produced by the Ministry of Construction- and Road-Machine Building during the past 5 years come under 400 individual designations, comprising diggers, road machines, hoist and transport machines, loaders, electric and pneumatic construction tools, and equipment for production of building materials. A great many of these new machines had never before been built by plants of the ministry.

Along with the increase in the range of products, there was an increase in volume of production. The Five-Year Plan for gross production was fulfilled by the ministry on 12 December 1949. During 1950, enterprises of the ministry produced 7.7 times as many excavators as in 1940, 47 times as many bulldozers, 8.5 times as many scrapers, and 7 times as many graders. As a result of these achievements, the country is now free from the need of importing foreign machines.

In addition to renewing the production of prewar models of single-bucket excavators, the production of new machines of improved design was launched.

The universal crawler-mounted excavator cranes of 0.5-cubic-meter-bucket capacity put out by the Kovrov Excavator Plant, and those of one-cubic-meter capacity put out by the Voronezh Excavator Plant, are giving a good account of themselves at numerous construction sites throughout the land.

- 1 -

**CLASSIFICATION**      **CONFIDENTIAL**

**CONFIDENTIAL**

[illegible]

**CONFIDENTIAL**CONFIDENTIAL

50X1-HUM

Two new crawler-mounted excavators, one having a bucket capacity of 0.25 cubic meters, the other of 0.35 cubic meters, are now in production. The latter is particularly well adapted to extraction of peat because of the low pressure it exerts on the ground. Single-bucket excavators are being made with supplementary fittings, making it possible to rig them as draglines, trench hoes, clam shells, or pile drivers.

There has been an increase in the number of types of multiple-bucket excavators, and many old models have been modernized. Recent years have seen the production of the following multiple-bucket machines: a model having a transverse-bucket arm, 18-liter buckets, and a productivity of 20 cubic meters per hour; two ditching machines which can dig to a depth of 2.5-3.5 meters, designed for making irrigation canals or laying pipes; a ditching machine which digs to a depth of 1.2 meters, for laying telephone and power cables; heavy machines of 30-liter-bucket capacity and a productivity of 140 cubic meters per hour, for work on navigation canals; and a machine for digging and cleaning main irrigation canals.

The ministry has put out a great many heavy-duty scrapers, bulldozers, grader elevators, trailers, and conveyers. The D-147 scraper of 6-cubic-meter capacity can move 400-500 cubic meters a distance of up to 150 meters in one shift; under Stakhanovite methods it can replace the labor of 300 workers. Many 10-cubic-meter-capacity scrapers are now being produced.

Production has been started on diesel-powered pile drivers with striking parts weighing 600, 1,200, and 1,800 kilograms, as well as on steam-pneumatic, double-acting pile drivers with striking parts weighing 1,130 kilograms.

Machines now produced by the ministry for preparing, transporting, and applying concrete are completely mechanizing these processes at average-size construction sites. Heavy batching plants, which can be taken down and put up, have been built for use at large hydrotechnical construction areas. They are automatic, and can turn out up to 2,000 cubic meters of concrete in a day. The ministry has also produced a number of containers equipped with unloading devices, in which the concrete is transported from place to place. The All-Union Scientific Research Institute for Construction- and Road-Machine Building, working with the Moscow Rostokinskiy Plant, has designed and put into production a horizontal, single-action concrete pump with a productivity of 20 cubic meters per hour, capable of moving the concrete up to 250 meters horizontally and 40 meters vertically.

In answer to the Five-Year Plan for extensive development of highways, a great number of special machines were built. Heavy sheeps-foot rollers, 5- and 10-ton motor rollers, towed smoothers, road brushes, gravel spreaders, truck-mounted asphalt spreaders, asphalt heaters, and asphalt-mixing units with a productivity of 30 tons per hour are now being produced. Production has begun on a movable asphalt heater-circulator, and on three-roller motor rollers weighing 9-12 tons designed for smoothing out asphalt paving. A great many asphalt spreaders are put out by the Bryansk Road-Machine Plant. The Nikolayev Road-Machine Plant has launched production of a broad range of machines and devices for mechanizing the construction of concrete roads, including spreaders, finishers, smoothers, and seam cutters.

Various types of truck- and tractor-mounted snow-cleaning devices have been turned out by plants of the ministry.

Series production was begun on a great deal of hoist, transport, and loading equipment, including stationary and movable belt conveyers, self-propelled, multiple-bucket loaders, 4-cubic-meter, front-end loaders mounted on S-80 tractors, truck cranes of 3- and 5-ton capacity, various types of construction winches, and vertical-boom hoists.

- 2 -

CONFIDENTIAL**CONFIDENTIAL**

**CONFIDENTIAL**CONFIDENTIAL

50X1-HUM

The Odessa Yanvarskoye Vosstaniye Plant built some self-propelled railroad cranes of 25- and 10-ton capacity, and some self-propelled cranes running on pneumatic tires, of 10-ton capacity. Tests conducted in 1950, showed these cranes to be highly efficient and well designed. During 1948-1949, production was launched on a series of construction cranes. Equipped with booms capable of swinging through a complete circle, the cranes are able to raise themselves from one story to the next under power of their own winches. These cranes have a lifting capacity of 0.8-1.6 tons, and a boom radius of 20-25 meters. The cranes were first tested on Moscow construction sites and found to be highly satisfactory. Success was achieved in the use of truck cranes of 5-10 tons capacity, and of crawler-mounted excavator cranes of the same lifting capacity, in the construction of one- and two-story buildings.

Production was begun on machines for mechanizing plastering work, including movable lime-slaking machines, and pumps for moving the lime from the slaking pit. Electrical tools for finishing marble, parquet, and concrete floors were put into series production. Various electrical tools running on high-frequency currents were put out.

The ministry met with difficulties in the production of sufficient equipment for turning out the increased amount of building materials called for by the Five-Year Plan, because it had not had sufficient experience in designing such equipment. Special attention had to be devoted to the designing of equipment for producing materials for the construction of walls.

Enterprises of the ministry have already put out complex devices for making bricks, cinder blocks, tiles, and ceramic pipes, as well as heavy-duty vacuum presses for producing durable hollow bricks. Production was begun on equipment for a brick plant which will turn out 10 million bricks per year. During 4 years (1947-1950), one trust built and put in operation over 100 cinder-block plants, having an over-all yearly productivity (figured in red bricks) of 1.4 billion bricks.

New, intricate machines for conveyer-belt production of mineral wool insulating materials have been designed and are being put out.

Equipment is being built for dry-gypsum-plaster plants which have a productivity of 4 million square meters of sheet per year, and for corrugated asbestos-slate plants, having a productivity of 3.5 million square meters per year.

In accordance with the decision of the Council of Ministers USSR, a great number of mechanized quarries for gravel, sand, and rock are to be established. When the mechanization of the rock quarries reaches a level comparable with that of the open-pit coal mines, ore, and limestone mines, the quarrying and processing of rock should become a big branch of the construction industry.

To equip these quarries, the ministry began series production of crushing-screening aggregates with a productivity of 10 tons per hour, stationary and movable units having a productivity of 30 tons per hour, and heavy crushing plants with productivity of 100 tons per hour. Various machines for sorting and washing gravel, rock, and sand, will be produced in great quantity. A group of concentrating machines is already in production. Excavators of 2-cubic-meter capacity, now in production at the Voronezh Plant, will be widely applied in the quarries.

Despite its recent achievements, the Ministry of Construction- and Road-Machine Building is failing to meet fully the nation's demands for the production of construction materials and the mechanization of construction work.

In 1950, special attention was paid to the serious deficiencies in the field of capital construction, and in particular, to its unusually high cost. To insure high-quality construction and to reduce its costs, deficiencies in mechanization must be overcome. Accordingly, the government has set itself the task of completing

- 3 -

CONFIDENTIAL**CONFIDENTIAL**

**CONFIDENTIAL**CONFIDENTIAL

50X1-HUM

in the next 3-4 years the mechanization of basic construction work, effecting a transfer from mechanization of separate processes to an integrated mechanized system for earth moving, loading, transportation, concrete work, erection, and quarrying operations.

Successful fulfillment of this task will, to a considerable measure, depend on the construction- and road-machine industry. Within the next few years, enterprises of the Ministry of Construction- and Road-Machine Building must increase the production of excavators, cranes, construction- and road-machines, and construction tools at least 2.5 times.

To insure the complex mechanization of construction processes it is necessary to design and put in production within the shortest possible time many new types of heavy-duty machines and mechanisms, including cranes of 25-ton lifting capacity, both pneumatic and crawler mounted; railroad boom cranes of 50-ton lifting capacity; machines for unloading cement and other dry goods from closed cars; heavy, stationary concrete mixers of 4,500-liter volume for concrete plants; concrete pumps capable of moving 40 cubic meters in one hour; complex equipment for preparing dry mixtures; steam-pneumatic pile drivers with differential action, with striking parts weighing 3.5 tons; powerful scrapers, bulldozers, rollers, and towed and powered graders.

One of the great problems of the day is that of broadening the production of heavy-duty equipment for the construction-materials industry. The output of this equipment must be tripled in the next few years, and production of equipment for turning out bricks, gypsum, and lime must be assured. It is necessary to design and put into production complex equipment for the manufacture of new, effective construction materials and products, such as gypsum blocks and parts, asbestos-cement sheets, pipes and shaped products, and ceramic products.

- E N D -

- 4 -

CONFIDENTIAL**CONFIDENTIAL**